Transforming Peripartum Nurse Knowledge Exchange (NKE) through a Standardized Handoff Guide

Lillian Quach
University of San Francisco, lquach2@usfca.edu

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Transforming Peripartum Nurse Knowledge Exchange (NKE) through a Standardized Handoff Guide

Lillian Quach, RN
School of Nursing and Health Professions, University of San Francisco

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Scout E. Hebinck, MSN, RNC-OB

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Abstract

Problem Medical errors and adverse events can result from inconsistent handoffs during patient transfers. As seen in Hospital A’s peripartum unit, there is no formal policy regarding the handoff process, also known as the Nurse Knowledge Exchange (NKE). This quality improvement project aims to introduce a standardized handoff guide to enhance communication and minimize harmful outcomes following patient transfers. Context The setting for this project is an urban hospital in Northern California with nine laboring beds and 21 postpartum beds. Interventions The project employed a systemic approach involving stakeholder involvement, literature review, and data analysis to identify areas for improvement in the handoff process. Standardized handoff manuals and protocols were created and piloted based on the assessment. Offering training and education to the staff ensured consistent and efficient utilization of the updated handoff procedures. Measures The project’s outcome measure is the comprehensiveness of NKE, which is evaluated by a numerical grading tool. Results The utilization of the bedside handoff guide led to a remarkable enhancement in the comprehensiveness of handoffs. The occurrence of NKE at the bedside increased from 33.5% to 77%, while the overall comprehensiveness of NKE increased from 74% to 91%. Conclusions The successful implementation of standardized handoff protocols within the peripartum mesosystem demonstrates the efficacy of best practices in enhancing patient safety and care quality during transfers. It is crucial to maintain these improvements by constantly monitoring and evaluating the protocols.

Keywords: bedside report, handoff communication, NKE, peripartum
Transforming Peripartum Nurse Knowledge Exchange (NKE) through a Standardized Handoff Guide

As seen in a clinical setting, nurses and other healthcare professionals utilize patient handoffs to transfer and accept patient care responsibility to ensure continuity and safety of patient care (The Joint Commission, 2017). While the handoff process is a universal practice in healthcare, research has shown that common barriers to ineffective handoffs stem from incompetent communication, unstructured handoff, and the absence of handoff protocol (Chien et al., 2011). Inadequate handoff communication between healthcare providers poses a critical patient safety issue in the clinical setting, as it can result in medical errors or sentinel events. Consequently, the Joint Commission (2017) established a National Patient Safety Goal in 2010 for healthcare organizations to standardize handoff communication through various tools and methods, such as forms, templates, and checklists, to convey to receivers. The benefits of a structured and standardized handoff include improved patient outcomes, such as lowered patient falls, lengths of stay in the hospital, deaths, and frequency of emergency codes (Mardis et al., 2017).

Within Hospital A's mesosystem, the Northern California's peripartum unit launched a quality improvement (QI) project initiative. The nurse managers observed the current handoff process to be conducted too casually when the handoffs should be well-structured and focused to ensure a continuum of care. Although bedside handoffs should be a standardized process, the sustainability of such practice is often unsuccessful after implementation. To uphold the feasibility of such practice at Hospital A, the focus of the QI project was to standardize the Nurse Knowledge Exchange (NKE) process, also known as the handoff report, during labor and delivery (L&D) to postpartum (PP) patient transfers. Essentially, the NKE provides a coherent
handoff between the outgoing and incoming nurses that focuses on individualized care by keeping patients informed and involved in their care.

The mission of Hospital A is to provide high-quality and accessible healthcare services and improve the health of its members and the community they serve (Hospital A, n.d.). Furthermore, Hospital A embodies the vision to create communities that are the healthiest in the nation by continually advancing their practice through extensive research and providing innovative care. As a result, the incoherent handoff process has urged Hospital A to prioritize the quality and uniformity of NKE to enhance safe patient outcomes and reduce medical errors. The following paper will investigate the status of handoffs at Hospital A and develop practical tools and interventions based on best practices to refine their transfer of care process.

**Problem Description**

Hospital A is an urban 247-bed medical center in Northern California. The peripartum unit consists of the L&D and PP units, with 176 devoted nursing staff members employed. The L&D unit comprises 107 nurses and operates with nine recovery beds, two post-anesthesia care beds, and three triage beds. On the other hand, the PP unit has a team of 69 nurses with 21 beds spreading across the third and sixth floors in Hospital A, of which 11 beds on the third floor can be designated for antepartum care. Additionally, the management team consists of one nurse manager and five assistant managers for each of the two peripartum units.

The current understanding of inconsistent handoff in the peripartum unit was brought to attention by the unit-based council (UBC) members as they are nurses who regularly engage in the handoff process. Similarly, the nurse manager stated that NKE is a standard of nursing practice within their organization as it promotes patient safety; nurses are expected to give handoffs at the bedside, utilize a computer within the patient’s room, and relay relevant patient
information from a structured handoff tool. Hence, the metric for this QI project is the adequacy of NKE components covered during the transfer process.

While Hospital A encourages standardizing the practice of NKE, the peripartum unit currently does not follow this principle and will require an organized framework. Based on preliminary baseline observation, it was evident that the handoffs were disorganized in structure, excluded vital information, and were conducted at the nurse’s station rather than at the bedside. Research shows that bedside handoffs encompass the six crucial domains of healthcare quality: patient safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity (Winebarger, 2022). In other words, implementing bedside handoffs is a strategic method to improve communication and reduce errors in patient care.

When asked about their opinions about their overall stance on the NKE practice, most of the nurses reported being somewhat satisfied with the current status of handoffs and felt like it had been quite comprehensive; however, they did report there could be room for improvement. During the conversations shared with the nurses, handoffs are not done at the bedside because nurses do not want to disturb the patient, issues with patient confidentiality, and the absence of computer access in the room. Although it is ultimately up to the nurses to decide the type and setting of their handoffs, this QI project explores the gaps in handoff quality to suggest standardizing the NKE practice.

**Available Knowledge**

**PICOT Question**

The population, intervention, comparison, outcome, and time (PICOT) tool was utilized to facilitate a literature search for the QI project. The PICOT question was prompted: “For peripartum registered nurses, does implementing a standardized handoff tool enhance the
comprehensiveness of the handoff process during labor and delivery to postpartum patient transfers over two weeks?"

Search Methodology

The quality improvement (QI) team explored several medical databases, including Google Scholar, PubMed, and CINAHL. Pertinent keywords relevant to the PICOT question were searched, such as handoff, bedside shift report, peripartum, labor and delivery, postpartum, and standardized. Since the primary intervention focuses on standardizing handoff within a high acuity unit, studies related to bedside shift reports in inpatient settings were examined. Moreover, the search was filtered to only publications within the last 10 years to ensure applicability. After selecting the relevant literature evidence, 12 articles were subjected to critical appraisal using the Johns Hopkins Nursing Evidence-Based Practice methodology to assess the evidence level and quality, all of which can be seen in Appendix A (Dang & Dearholt, 2018).

Out of the 12 articles selected in this review, one study was a randomized controlled trial (Level I), another study was found to be quasi-experimental (Level II), while seven studies were referred to as Level III (descriptive, non-experimental, and mixed-method non-experimental); lastly, three studies were classified as Level V (case studies, project improvement, and integrative review). The vast information in this literature review makes an excellent resource for transferable research to establish a uniform standard in the peripartum mesosystem’s NKE process.

Literature Synthesis

In summary of the available knowledge, this discussion consists of various journal articles similar to structured handoffs, bedside reports, educational interventions, and measurement of handoff quality. As seen with structured handoffs, Bukoh and Siah (2020)
asserted that using such handoffs provided an organized method of communication between nurses and patients. The findings revealed that incidences of medication errors, patient complications, and general adverse events were reduced because discrepancies between what the nurse sees and hears from the oncoming nurse can be immediately compared (Bukoh & Siah, 2020). In a related study, Smeulers et al. (2014) examined the nature of handoff failures among hospitalized patients. They argued that insufficient interpersonal communication between healthcare professionals was one of the main factors. This included an unstructured handoff process, omission of contents, and uncertainty surrounding the components during handoff (Smeulers et al., 2014).

While both articles by Bukoh and Siah (2020) and Smeulers et al. (2014) are systematic reviews, it is important to remember that these findings originate from various studies and may not be generalizable. Inevitably, an absence of structure and protocol for handoff may lead to unfortunate patient outcomes, such as increased incidences of redundant tests, treatment delays, duplication in work, and longer hospital stays (Bukoh & Siah, 2020). These findings support the QI project’s goal of developing a handoff guide for nurses at Hospital A to utilize during patient transfers so that there is no omission of patient information and prevent adverse events.

In a randomized controlled trial study by Robins and Dai (2015), the use of a checklist tool containing pertinent patient information during transfers resulted in a decreased need for information clarification and prevented potential information loss. More specifically, the checklist was able to help nurses identify more key elements than those who did not use the tool. Despite this study being carried out within the postoperative anesthesia care unit, the findings apply to Hospital A’s mesosystem, in which the standardization of a checklist tool between L&D and PP units will result in a smoother transfer of care.
Another study concerning structured handoff implemented various interventions to improve the transition of care between the triage unit and L&D by standardizing the staff roles and processes (Lee et al., 2018). In particular, a bedside huddle safety board and script guide were posted for nurses to refer to during handoff. Such implementation improved workflow efficiency, timelier communication, and patient care from the triage to the L&D unit (Lee et al., 2018). Hospital A currently does not have a clear handoff protocol; therefore, nurses expressed that some patient transfers are disorganized and have varied handoff quality. Nonetheless, the execution of standardized nursing handoff tools, which included a structured format in reports and safety checks, found that nurse communication improved from 73.8% to 77.4% within four years of enforcement (Lin et al., 2015). However, researchers mentioned that nurse satisfaction was not assessed, and the change was not sustained after implementation (Lin et al., 2015).

Based on these findings, the QI team plans to establish a handoff script guide that includes applicable patient information to warrant a more thorough and efficient transfer of information between the L&D and PP nurses.

Besides standardizing handoff methods, research has shown positive outcomes when handoff occurs at the bedside. Wollenhaup et al. (2017) affirmed that employing a modified bedside handoff situation, background, assessment, and recommendation (SBAR) tool increased engagement and satisfaction among the nurses and patients; moreover, communication errors were decreased. Standardizing the handoff tool increased nurses' compliance with including all necessary components during handoff. Nurses who partook in bedside handoff also prioritized their work better as they had already visualized and assessed their patients at the start of their shift (Kullberg et al., 2018). Since most nurses within the microsystem were not fully satisfied with the current handoff practice, the application of bedside handoffs can enhance the attitude
and work ethics among the nurses. Despite these strong findings, the limitation of this study was that data was gathered from a small, rural hospital, where the workflow and culture may differ compared to larger, urban hospitals.

In the same way, Elue et al. (2019) urged that bedside handoff promotes individualized care because the patient’s plan of care is communicated among nurses, patients, and their families. Although the study was based on self-reported data and had a short study duration of six months, bedside handoff helped nurses meet the patient’s expectations for better care, which is important in peripartum care. Consequently, performing bedside handoffs also promotes patient safety, as sentinel events are less likely to occur if nurses spend more time at the bedside during handoffs (Williams, 2018). This is because patients are not alone during the handoff process, and nurses can visualize patients and implement safety checks within the first hour of their shift (Williams, 2018). In the peripartum unit at Hospital A, the practice of bedside handoffs is currently not in place. Therefore, it is crucial to educate stakeholders that bedside handoffs will enhance not only the safety of patients but also the patients’ perception of nurses’ perceptibility and accessibility during their care visits.

Even though abundant research promotes patient participation during bedside handoffs, resistance may be faced by patients or nurses. As seen in the review by Tobiano et al. (2019), tension was found between standardizing handoffs and making them predictable for patient involvement. It was explained that nurses needed to be trained to be more flexible in their approach toward sensitive and confidential patient information. In a sense, educational training was found to help build nurses’ confidence and capacity to conduct bedside handoffs and encourage patient participation during handoffs (Tobiano et al., 2019). On the contrary, the limitations of this study included research studies that were irrespective of their quality;
stakeholders, such as the patients, were also not involved during the review process to strengthen the findings. Making patient roles more explicit during handoff can heighten their participation, and Hospital A’s mesosystem currently sees a decline due to inadequate enforcement of bedside handoffs.

To understand factors contributing to the difference in handoff quality among nurses, Kim et al. (2020) investigated the status of handoffs, perception of patient safety culture, and degrees of handoff evaluation in small and medium hospitals. The study expressed that level of education, work patterns, and duration of hospital employment were some of the biggest factors that led to variability in handoffs. For instance, out of 425 nurses, only 8.4% had received an official handoff education; 90% of the nurses acquired the handoff skills through observations and verbal teaching from senior nurses (Kim et al., 2020). A similar study by Walsh et al. (2018) identified that nurses found improvement in work effectiveness, satisfaction, and communication after attending a learning module presentation on the best practices for handoff. Even though the findings were significant, the limitation of this study was that only one nursing unit was assessed and that not all the participants were matched from the pre-test to the post-test. Integrating educational interventions and standardizing handoff guidelines may benefit the nurses by uniting them and delivering care prioritizing patient safety. At Hospital A, handoff educational courses are not known to be offered during the initial orientation to the peripartum unit; hence, this may explain the variability in handoff quality as it sets an expectation that such standardization of handoffs is not a priority and does not necessarily need to occur. As a result of these two article findings, incorporating an educational component is essential to achieve the project’s goal of standardizing the handoff process.
Research shows that utilizing a standardized handoff tool enhanced patient outcomes, increased nurse satisfaction, and reduced medical errors or information loss. Likewise, conducting handoffs at the bedside promoted safety by holding staff more accountable and fostering patient-centered care by allowing patients to participate in their own care. Regarding the research question of the QI project, applying these handoff interventions will ensure the transfer of patient information is more concise yet thorough. Furthermore, these standardization efforts may also improve the work culture between the L&D and PP units, as findings revealed increased work efficiency and satisfaction.

**Rationale**

As the healthcare system constantly advances to meet the dynamic health demands of a growing population, the need for change is inevitable. Change theories can play a vital role in providing a roadmap for how an intervention can assist an organization in achieving long-term goals and creating meaningful impact. Hence, Lippitt’s Seven-Step Change Theory was applied to guide the implementation of the QI project through seven cyclic phases. These seven cyclic phases include: assessing the problem and motivation to change, diagnosing the problem, planning goals, implementing actions, stabilizing change, and terminating the helping relationship, in which the change agent is let go and change is maintained (Adelman-Mullally et al., 2023). One weakness of this framework is that when faced with barriers to change, Lippitt’s theory may be unsuccessful if used for retrospective problems as it can lead to additional restraining forces, such as decreased job satisfaction. Still, one strength of this theory is that nurse managers are more likely to use this change model because it incorporates the four elements of the nursing process: assessment, planning, implementation, and evaluation (Adelman-Mullally et al., 2023).
The first phase of Lippitt’s change theory can be implemented by gathering data on the stakeholders’ opinions about what issues need to be improved. In this case, the UBC members and nurse managers identified a discrepancy in the quality of handoffs between the L&D and PP units during patient transfers. Observing several patient transfers showed that the handoff process could have been more thorough and well-structured. While implementing a bedside shift report can help promote a smooth and safe patient care transition, it should be assessed whether the nurses are in favor and motivated for this potential change as they are one of the major stakeholders of this QI project. These assessments of nurse attitudes are included in Lippitt’s second and third phases. Thus, a pre-survey and correlating flier will be created and shared with nurses from both units to inform and receive their opinions regarding the project. Additionally, to acquire buy-in from the stakeholders, the QI team collaborated with the nurses to create a handoff guide.

After approval of the change, the fourth and fifth phases of Lippitt’s change theory will be applied by providing a detailed written plan that includes the responsibilities of each staff member, a timetable for meetings to discuss the project’s progress, and deadlines for the expected behavior to be achieved. Throughout this period, educational training on the handoff guide and staff responsibilities will be implemented over a one-week period. Post-education patient transfers using the new handoff intervention will be observed by the sixth phase for two weeks. Lastly, the seventh phase of Lippitt’s change theory is said to terminate the helping relationship; in other words, the changed behavior will be monitored, updated, and maintained as part of the mesosystem’s handoff protocol and accepted practice. Overall, the project is expected to change the workflow and behavior of nursing staff during the patient transition from labor and
delivery to postpartum care by adding a new behavior of conducting a standardized shift report at the patient’s bedside.

**Ethical Considerations**

This project reflects the guidelines for an evidence-based QI project. An IRB review was not required. A statement of non-research determination (SONRD) form was completed to verify this QI initiative (Appendix B), followed by a review and approval by the clinical faculty of the University of San Francisco, School of Nursing and Health Professions.

Focusing on ethical considerations, one provision from the American Nurse Association Code of Ethics that applies to this QI project is provision 2.3: collaboration. Nurses are expected to foster safe, high-quality, patient-centered care through collaborative planning with other healthcare professionals (American Nurse Association, 2015). Although L&D and PP units each have their own work culture, it is important for nurses to remember that collaboration within nursing is necessary to address patients' health. By establishing a standardized NKE process across the peripartum unit, the collaborative nature can help close the gap in handoff quality.

Concerning the Jesuit values followed by the University of San Francisco, the value of cura personalis means caring for the whole person (University of San Francisco, n.d.). This value is connected to the QI project’s goal of promoting human dignity through the opportunity to deliver safe and patient-centered care by enhancing nurse handoff communication.

**Project AIM**

This QI project aims to improve the comprehensiveness of NKE for PP nurses by 5% during the L&D to PP patient transfer by the end of April 2024. This was to be attained by implementing a standardized bedside handoff guide. Measurement of the comprehensiveness of NKE will be based on the handoff guide, in which the percentage of NKE completeness is
correlated to the number of NKE points completed. The handoff intervention outlined throughout this paper will aid the leadership and management teams with the necessary tools and data to ensure a thorough and consistent report during transfers of care from L&D to PP.

Methods

Context

Mesosystem Assessment

Purpose. The overall purpose of Hospital A is to deliver top-notch and cost-effective healthcare services to enhance the health of its members and community. In the mesosystem of Hospital A, the L&D and PP units provide acute inpatient care to pregnant individuals and their newborns. In general, the peripartum unit aims to ensure optimal health and safety for both the mother and baby during all stages of labor.

Patients. The patients who make up the peripartum unit consist of pregnant individuals who are in all stages of labor, families of the patients, insured and uninsured patients, and neonate patients. Likewise, the patient population is demographically diverse as Hospital A is an urban medical institution in Northern California that provides local services to patients, including Caucasians, Asians, Hispanics, and African Americans.

Professionals. The mesosystem comprises an interdisciplinary team, including obstetrician-gynecologist physicians, medical residents, neonatologists, pediatricians, registered nurses, certified nursing assistants, unit secretaries, lactation consultants, and social workers. The leadership team includes the director of nursing, the nurse managers, and the assistant nurse managers. Each unit comprises part-time, per diem, and travel nurses.

Processes. The peripartum unit uses several processes to deliver care to their patients, including admission to or discharge process from either L&D or PP units, handoff process,
prenatal education, postpartum aftercare, and health assessments, such as assessing for blood loss, pain, infection, and hypoglycemia. Each of these processes needs to be meticulous as there is a potential risk for adverse safety events. The handoff occurs at various times throughout the day, for example, during shift change, mid-shift assignment changes, and transfers from L&D to PP units.

**Patterns.** Patterns that characterize the peripartum unit’s functioning include ensuring effective communication, monitoring patient flow, responding to obstetric emergencies, and understanding postpartum recovery. For instance, to exchange patient information during transfers or shift changes, nurses in the mesosystem engage in handoff reports. Another pattern that helps function the peripartum unit is that the L&D and PP units each have monthly UBC meetings to collaborate to improve nursing care efficiency and delivery in their respective units.

Upon observing the functioning of the mesosystem, the QI team noticed a need for a comprehensive, standardized handoff guide protocol for patient transfers from the L&D to PP units. The transfer protocol is as follows: the L&D charge nurse contacts the PP nurse 30 minutes before a transfer so the receiving PP nurse can prepare the room for admission. Once the PP confirms a time to transfer the patient, the L&D nurse will bring the patient to the PP unit and provide a handoff report. However, the handoff reports during transfers are inconsistent as parts of the handoff components may be given at the bedside or the nurse’s station; additionally, some patient information is omitted during handoffs. As a result, these inconsistencies highlight the need for a standardized handoff process.

**Strengths Weakness Opportunities Threats (SWOT) Analysis**

A SWOT analysis was done to understand the mesosystem better in identifying Hospital A's peripartum unit's strengths, weaknesses, opportunities, and threats (see Appendix C).
**Strengths.** One of this project's critical internal strengths is the strong support and engagement from the unit leadership team as the peripartum UBC members initially proposed this project topic. This level of support for a more comprehensive handoff ensures that the stakeholders are committed to patient safety. Likewise, the existing handoff in the peripartum covers 74% of the necessary content, illustrating that most content is being covered but not at the bedside.

**Weaknesses.** Upon analysis of the peripartum unit, several weaknesses were identified. There is currently no data on NKE compliance or standardization of the handoff process. Moreover, there is some work tension between the L&D and PP units as the PP units are generally more resistant to change. The internal force of suboptimal managerial involvement may explain the insufficient handoff quality. For instance, there tends to be an absence of a PP charge nurse as they often work as part of the floor nurses; similarly, the L&D unit had no direct leadership figure until last year when the new director was appointed. Elevated rates of staff turnover within the nursing workforce may also result in irregular knowledge transfer regarding the handoff process, which underscores the necessity for possible ongoing training initiatives. Another prominent weakness mentioned by the peripartum nurses was the physical constraint of bringing computers into the patient rooms as the rooms are small; essentially, the confinement in the room serves as a barrier to conducting bedside handoffs.

**Opportunities.** When investigating the opportunities for the peripartum unit, standardizing the handoff during patient transfers may promote a culture of safety, patient-centered care, and staff development. Implementing the handoff guide to encourage bedside handoff may also benefit the peripartum unit by adhering to the Joint Commission’s mandate of standardizing handoff communication (Joint Commission, 2017).
**Threats.** External threats that may delay the project’s implementation may include one factor, like slow-moving change, since altering the work culture takes time to adjust. Another factor may be the physical and environmental constraints because the peripartum unit is not designed for its intended use. Lastly, the patient rooms are limited in space, which is one of the reasons why nurses cannot use the computers, as they are inconvenient and difficult to fit within the room.

**Fishbone Analysis**

A fishbone analysis was conducted to determine the potential cause of no NKE standardization within the peripartum mesosystem (see Appendix D). Multiple factors were investigated to assess what may have led to the inconsistencies in handoff quality; the six categories included: people, culture, environment, methods, equipment, and material.

In relation to the factors of people and culture, it is not a shift standard to have a PP charge nurse, as the so-called charge nurses are often working as part of the floor nurses. The absence of leadership in the PP unit may lead to disorganized patient transfers and unclear responsibilities of the nurses involved. Similarly, the suboptimal use of Voceras may be a factor to consider as L&D nurses are known to have this equipment on them; meanwhile, PP nurses rely on the unit secretary to receive updates and calls from the L&D unit. The tension and low morale between the L&D and PP units may also hinder the collaboration of standardizing NKE during patient transfers. Likewise, conducting bedside handoff is not part of the culture in the peripartum unit, as family-centered care does not seem to be a priority during handoff.

Other factors contributing to NKE not being standardized include the absence of an NKE checklist tool and an unknown process regarding NKE policy. Since there is no standardization for handoff, nurses are giving reports based on their own preferences, which may be a risk for
errors from providing misinformation or omitting vital patient information. Lastly, the environmental factors of confined physical space, privacy issues related to patient visitors in the room, and the distractions of other personnel—such as the nursing assistants taking vital signs during handoff, may all lead to the inability to standardize NKE at the bedside.

**Budget Analysis**

A cost-benefit analysis was performed for this QI project to evaluate the expense and feasibility of this project intervention (see Appendix E). Hospital A currently sees a total of 3,000 births per year, which is equivalent to 3,000 patient transfers annually. Among those transfers, approximately 85% violate HIPAA compliance, which equals about 2,550 transfers. This estimated percentage is based on the baseline observation data, in which 85% of the handoffs are not being done at the bedside. The cost of violating HIPAA varies depending on the severity of the issue. As seen at Hospital A’s peripartum unit, the non-adherence to bedside handoff would be categorized as tier two, a violation that should have been known but could not have been avoided. Moreover, the HIPAA penalty ranges from $1,379 to $68,928, with the maximum yearly penalty being $2,067,813 (The HIPAA Journal, 2024). Since the minimum penalty cost multiplied by the non-HIPAA compliant transfer exceeds the cap amount of $2,067,813, this amount is used as the cost avoidance for this project.

The cost of implementing this project consists of printing the NKE handoff guide, hiring a clinical nurse leader educator, and training nurses. In sum, the total implementation cost of the QI project is projected to be $34,846.80. Thus, Hospital A can achieve an annual savings of $1,998,119.20 by following HIPAA standards with the NKE handoff guide, calculated by deducting the yearly cost avoidance from the total implementation cost.

**Gantt Chart**
The timeline of this QI project spans approximately 20 weeks, which took place between January 2024 and May 2024. A Gantt chart (see Appendix F) was created to manage and organize the project timeline, which consists of planning the implementation and evaluation of the intervention for Hospital A’s peripartum unit. The Gantt chart comprises four main tasks: project planning, implementation, evaluation, and performance.

In the project planning stage, the QI team met with the clinical instructor and peripartum assistant nurse manager in late January to discuss the general overview, expectations, and guidelines for carrying out the project. Over the next few weeks, the QI team spent the rest of February finding literature evidence to support the importance of the QI project. In addition, pre-survey questions were developed and disseminated around the unit to assess the peripartum nurses’ opinions on the handoff practices and barriers. Likewise, the intervention of a handoff guide was created to include pertinent NKE components in the form of a checklist; feedback was received from both the L&D and PP nurses for ongoing revisions.

During the implementation stage, baseline observations of the current handoff process were observed over the course of approximately three to four weeks. Soon after, the NKE checklist was finalized based on the feedback received from the peripartum nurses and used as an educational tool for nurses. Simultaneously, post-education observations occurred during the month of April utilizing the new NKE handoff guide. By the end of April, the project evaluation phase includes developing and implementing a post-survey for nurses who utilized the intervention tool and analyzing the observed data using the handoff guide intervention. By May, the QI project reached the performance phase, which consisted of presenting the findings to the peripartum’s staff and leadership teams. Overall, this Gantt chart was a tracking tool and was updated as needed throughout the project implementation.
Intervention

To gain a better understanding of the current barriers and practices to bedside NKE, the QI team developed a pre-survey (see Appendix G) and a correlating flier (see Appendix H) to distribute around the unit to gather feedback from both the L&D and PP nurses; data was also collected through informal conversations shared with the nurses out on the unit. After examining the unit’s existing practices and processes regarding NKE, the QI team developed an evaluation tool (see Appendix I) to assess and evaluate the comprehensiveness of the NKE practices during the baseline observations. The assessment of baseline observations took place over approximately three weeks with the goal of assessing 20 patient transfers.

Soon after, the QI team proposed the intervention of a NKE handoff guide (see Appendix J) to be utilized during patient transfers. This handoff guide intervention was created based on best practices from evidence and feedback from the nurses on both L&D and PP units. This means the intervention is tailored to the needs of the mesosystem’s stakeholders and may aid in the feasibility of such intervention. Ideally, this handoff guide will be laminated and attached to each PP workstation on wheels (WOW) to encourage computer use at the bedside.

Simultaneously, an ongoing education plan presentation was provided separately to the UBC meetings for the units of PP (see Appendix K), and L&D (see Appendix L); the purpose of these educational presentations was to give nurses the project’s objective and obtain participation in QI team’s pilot project of utilizing the guide during transfers of care.

After educating the potential champions of the pilot project, the handoff guide was trialed on the units. In general, the QI team had a modest goal of observing 10 patient transfers using the intervention. During patient transfers, the L&D and PP nurses were educated on the guide before use and encouraged to conduct the handoff at the patient’s bedside with the computers in the
room. Lastly, a post-survey (see Appendix M) was given to the participating champions to assess their opinions on the effectiveness of the intervention. The implementation of the intervention took place over approximately two weeks.

**Study of the Intervention**

To evaluate the efficacy of the handoff guide during the pilot trial with unit champions from both the L&D and PP units, the QI team employed a Plan-Do-Study-Act (PDSA) framework (see Appendix N). Initially, the “Plan” phase identified the unit champions who would participate in the pilot study by utilizing the handoff guide during their shift whenever they were involved in a patient transfer. Members of the QI team were responsible for gathering post-intervention data by shadowing the unit champion during the NKE process. They assessed the thoroughness of the NKE by assigning a score of either “0” or “1” to indicate whether each item from the handoff guide was covered during bedside handoff.

During the “Do” phase, the QI team set the action plan in motion by recruiting, educating, and observing the unit champions conducting bedside NKE with the handoff guide. Once the handoff was completed, the L&D and PP nurses were given a post-survey to complete to obtain feedback on how useful the handoff guide aided them during the NKE process. The examination of post-intervention data took place during the “Study” phase of the PDSA cycle; this phase involved analyzing data gathered from post-intervention observations and post-survey responses from the participating nurses. More specifically, the guide’s effectiveness was evaluated by the comprehensiveness and percentage of NKE components covered during the handoff.

Finally, the “Act” phase of the cycle depended on the intervention’s outcomes. Based on the staff feedback and suggestions from the pilot project, the handoff guide intervention was
adjusted and trailed in this phase. Unanticipated challenges were faced with pushback from the PP nurses; however, this issue would be mitigated by providing literature evidence on best practices for NKE and approaching the assistant nurse manager for guidance and support in facilitating the change. Once the peripartum nurses and leadership team approve of the modifications, the NKE handoff guide will be handed off to the peripartum UBC members, and they will slowly implement this intervention as a permanent procedure within Hospital A’s peripartum unit.

**Outcome Measures**

The project’s primary outcome measure includes measuring the comprehensiveness of NKE based on the introduction of the NKE handoff guide. This measure was compared with the pre- and post-intervention, such that the increased percentage of NKE completeness is related to the number of NKE points obtained during the observed patient transfers. Other pre-intervention data collection included conversations shared with nurses and pre-survey responses, as those data were used to measure the satisfaction and quality of current handoff practices. Measures obtained from the post-intervention phase included data from post-surveys on the usefulness of the NKE handoff guide during patient transfers; this survey used a Five-Point-Likert scale to assess the nurse satisfaction and functionality of the intervention. Another measure worth noting is the number of project champion nurses who were educated on using the NKE handoff guide; there has been a discrepancy in either the L&D or PP nurses receiving education regarding the handoff guide, which can affect the percentage of NKE completeness done at the bedside.

**Results**

Over three weeks, 31 L&D and PP nurses from various shifts participated in a pre-survey through Qualtrics; 10 nurses were from the PP unit, while 21 were from L&D. Questions
covered handoff settings, frequency, and satisfaction with the current handoff process (see Appendix O). Results revealed that 45% of nurses did bedside handoffs, 51% used the nurse's station, and 4% used other methods like telephone reports. For the frequency of engaging in bedside handoffs, 29% of nurses said “always,” 39% “very frequently,” and 26% “occasionally.” Moreover, 52% found current handoffs to be “very comprehensive,” while only 39% rated communication effectiveness during transfers as “very effective,” and 26% said “moderately effective.” Overall, nurses expressed a moderate level of satisfaction with patient transfer handoffs.

Simultaneously, the QI team conducted a preliminary baseline observation of 20 patient transfers to understand the current state better and set project goal benchmarks. By utilizing the evaluation tool, nurses covered 74% of the necessary NKE content regardless of location; meanwhile, only 33.5% of NKE occurred at the bedside. Based on the NKE categories, only 29% of background content, 36% of delivery information, and 19% of baby progress were covered at the bedside. In contrast, 82.5%, 95%, and 74%, respectively, were covered either at the bedside or nurse’s station. Detailed baseline observation results can be found in Appendix P.

Following pre-survey and preliminary baseline data collection, the QI team observed 10 post-intervention sessions and collected post-survey data from seven L&D and three PP nurses over two weeks; this assessed the effectiveness of the NKE handoff guide following its use. During the NKE handoff guide pilot, the QI team noted that 77% of NKE content was covered at the bedside, with a total completion rate of 91% regardless of location; indicating a 43.5% increase in NKE being covered at the bedside, overall 17% increase in NKE completeness regardless of location from the pre-intervention baseline observation. Specific NKE category details of the post-intervention observation results are in Appendix Q. Likewise, the comparison
of improvement in bedside NKE comprehensiveness from baseline to post-intervention data is shown in Appendix R. In general, the post-survey results indicated that 60% of the nurses expressed “very satisfied” with using the handoff guide, while 70% found it to be “extremely comprehensive” (see Appendix S).

Discussion

Summary

Key findings from this QI project indicate that a standardized handoff guide can facilitate a more comprehensive and enhanced patient-centered handoff report. The comparison of pre- and post-intervention data indicates a 43.5% increase in bedside NKE completeness when nurses utilized the NKE handoff guide. The initial observations noted that nurses refrained from utilizing computers within the patient's immediate environment. However, a notable improvement was observed during the pilot project, in which 60% of nurses integrated computer usage at the bedside. Hence, the findings greatly surpassed the project’s goal by improving NKE thoroughness during L&D to PP unit patient transfers by more than 5%.

Research shows that miscommunication during handoffs may pose a risk to adverse events and patient health outcomes. Therefore, implementing standardized procedures and equipping nurses with tools to organize their handoff reports and validate information can help mitigate possible adverse events from misinterpretations. Overall, nurses found the new handoff guide comprehensive in covering the necessary NKE contents; they felt very satisfied with the report they received or gave during a patient transfer.

Concerning Lippitt’s Seven-Step Change Theory, this QI project closely approached the seventh phase, in which the QI team ends its involvement, and stakeholders sustain the handoff guide as part of the peripartum unit’s protocol. While the QI team had only conducted a
mini-pilot project with a few nurses and observed patient transfers, there is still a long way to go before the seventh phase of Lippitt’s change theory can be attainable within the mesosystem. Hopefully, the developed NKE handoff guide will help peripartum nurses be involved in a smooth transfer process and continue to conduct handoffs at the bedside with patient involvement.

Upon reflection, one of the main lessons from this QI project was that gaining staff buy-in and involvement is time-consuming but crucial for facilitating change projects. Initially, engaging nurses in surveys and discussions about NKE practices and barriers proved more challenging than anticipated. Furthermore, initiating communication with the peripartum UBCs at an early stage of the process facilitated greater awareness and receptiveness among other staff toward the QI project. This could have been accomplished by assistant nurse managers introducing the QI team and project plans during leadership huddles or by allowing UBC members to engage with the QI team from the beginning rather than relying on random interactions. Interacting with the nursing staff facilitated relationship-building and raised awareness regarding the absence of standardization in the NKE process. Nonetheless, the project’s positive transformations can be associated with the efforts and collaboration of the QI team, assistant nurse managers, UBC members, and most of the peripartum nurses who have been pivotal in being unit champions and part of the change.

Limitations

Although the QI project showcased a sufficient increase in NKE comprehensiveness, many limitations existed. One of the limitations was the time constraint of three months allocated for the QI project, which could have impacted the results. Similarly, the short study duration of the pilot project over the course of two weeks may limit the ability to gather detailed data and
observations on the intervention. With the peripartum unit being a high-volume teaching setting, the limited sample size and observed transfers may restrict generalizability as preliminary observation results recorded 20 transfers, and the pilot project included 10 transfers. Likewise, convenience sampling was used throughout this project as the QI team focused on data from only one hospital and nursing specialty, such that it may not apply to other specialties’ handoff processes. Since the pilot project was ideally designed to educate the L&D and PP nurses on the handoff guide, not every PP nurse was educated on it. Therefore, the NKE completeness and occurrence at the bedside varied if one of the nurses was not adequately educated. Finally, there was no matching of nurses from the pre-test to the post-test in the observed patient transfers, introducing complexity to the interpretation of results.

Conclusion

From a broader perspective, this QI project highlights the need for standardized handoff protocols in the clinical setting to ensure optimal patient safety and health outcomes. Despite the brief study duration in the intervention pilot, analysis of 10 post-intervention patient transfers and champion education indicated enhanced bedside and computer usage during handoffs. Likewise, the QI project provided the leadership teams with the necessary resources to implement lasting change in the NKE process. For the project's future, the QI team plans to share the tools for the UBCs to take over; this strategy ensures the sustained operation and execution of the project, even in the absence of the QI team.

Based on the findings of this project, there is an opportunity to extend a similar NKE handoff guide to additional units within Hospital A since standardized handoff protocols are not uniformly established. This practice implication could help Hospital A fulfill its mission of delivering high-quality patient care while reducing costs associated with potential HIPAA
violations. For future recommendations, staff education will be modified to include group training sessions and scenarios, allowing L&D nurses to engage in role-playing exercises better to comprehend PP nurses’ roles and vice versa. Moreover, leadership support would greatly benefit the future of this QI project as they ensure the QI efforts are sustained beyond the project's duration, as well as boost morale and motivation among staff. Overall, this QI project highlights the significance of ongoing education and collaborative efforts in improving bedside handoff practices, cultivating a culture that prioritizes patient safety and enhances care outcomes.
References


## Appendix A

**Johns Hopkins Evidence Appraisal Table**

<table>
<thead>
<tr>
<th>Citation</th>
<th>Evidence Type</th>
<th>Sample, Sample Size, Setting</th>
<th>How Does Article Address Problem?</th>
<th>Quality of Evidence</th>
<th>Other Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bukoh, M. X., &amp; Siah, C. J. R. (2020). A systematic review on the structured handover interventions between nurses in improving patient safety outcomes. <em>Journal of Nursing Management</em>, 28(3), 744-755. <a href="https://doi.org/10.1111/jonm.12936">https://doi.org/10.1111/jonm.12936</a></td>
<td>Systemic review</td>
<td>Retrieved 9 randomized controlled trial and quasi-experimental studies across 6 electronic databases. Total of 1,169 inpatient medical and surgical nurses from multiple disciplines were involved in the review. All studies were published between 2008 and 2017.</td>
<td>Nurses who followed structured handovers reduced the incidences of patient complications, medication errors, and general adverse events that usually occur. It also reduced the incidences of redundant tests, treatment delays, duplication in work, in which these can lead to a decrease in hospital stay and any possible adverse events. Medication errors were also reduced since the new structured handoff report enforced proper transfer of medication information. Bedside handoff reduces errors because discrepancies between what the nurse sees on the patient and what they hear from the oncoming nurse can be compared immediately. In relation to my QI project, this study can be used to strengthen the goal and intervention of standardizing the handoff components during the report. Likewise, the findings of having a bedside shift report can further persuade the stakeholders to participate in this change project. Based on the study, structured handovers led to multiple positive outcomes for both the patients and nurses.</td>
<td>Level III-A</td>
<td>Sufficient qualitative information was provided regarding the topic and shared knowledge interpretable interpretations from a great mix of evidence types within the literature review search. Limitations: Studies have different nature in literature reviews that are not consistent with one another and may lead to inaccuracy of findings. The structured handovers for each study differed and had a different outcome focus, which contributes to the diversity of the pooled studies. Outcomes: A structured handover model provides an organized channel of communication between the nurses and patients; moreover, it reduces handovers that contain omission of information, inaccurate information, and documentation errors.</td>
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<td></td>
<td>Quasi-experimental study</td>
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<td>289 postpartum women over 18 years of age responded to the study survey (146 in the pre-bedside shift report group and 143 in the post-bedside shift report group) Obstetric and postpartum setting, which is at a tertiary care facility located in the Chicago metropolitan area with a 26-bed postpartum unit</td>
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<td>Hispanic women and the public insurance patient population demonstrated higher satisfaction scores compared to non-Hispanic and private insurance background women after the implementation of the bedside shift report. This finding helps advocate for the potentially underrepresented patients within our microsystem. Bedside shift reports help promote patient-centered approach because the report would entail all the important information about the patient’s plan of care that is communicated among nurses, the patients, and their families near the bedside. In relation to my QI project, this article highlights the benefits of conducting bedside shift reports, such as improved patient satisfaction because it enhanced patients’ perception of nurses and nurse leaders’ visibility and accessibility during their care visit. This evidence can be used to educate and persuade the stakeholders of the microsystem to conduct more bedside shift reports since most of the handoffs are currently happening at the nurse station.</td>
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<td></td>
<td>Level II-A Good transparency, participant-driven inquiry, and insightful interpretation on the comparison between the two groups of either being Hispanic and/or with public or private health insurance. Researchers did not randomize any of the participant.</td>
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<td>Limitations: The study was based on self-reported data and had a short study duration of 6 months. The study was suggested to be replicated in other hospitals with different socioeconomic, racial, and ethnic individuals. Outcomes: Communication tools such as a bedside shift report play an important role in helping nurses understand their patients’ values and preferences; in this way, nurses can meet the patient’s expectations for better peripartum care. Researchers stated that communicative, interactive, and personalized care are all highly valued in the peripartum settings.</td>
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<td><strong>Descriptive study</strong></td>
<td>425 nurses who worked at small and medium-sized hospitals in South Korea that had 150 to 400 beds. Inclusion criteria of the nurses were nurses on duty, had at least six months of working experience, and understood the aim of the study.</td>
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<td><strong>Factors that made a difference in handoff evaluation by nurses were level of education, work patterns, duration of hospital employment, handoff method, degree of satisfaction with the current handoff method, errors occurring at the time of giving the handoff, errors occurring at the time of receiving the handoff, handoff guidelines, and appropriateness of handoff education time.</strong> Only 8.4% of all respondents said that they received handoff education as part of an official course in the form of lectures, training sessions, and standardized education materials. Likewise, 90% of them acquired the necessary skills through verbal teachings from senior nurses or through observations. Most nurses experienced errors in handoff and most nurses had no guidelines and checklist to reference. The findings of this study can be applied to my QI project’s pre-implementation phase, in which we would obtain feedback on a standardized handoff tool before establishing it into the microsystem, then provide education to the stakeholders on the benefits of this change and standardized policy. The findings stated that handoff should be improved through the establishment of guidelines and standards (i.e., education and standardized handoff methods) to ensure patient safety and high-quality care.</td>
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<td><strong>Level III-B</strong></td>
<td>Showcase good points about standardizing handoff reports and consistent recommendations for future studies with reasonably consistent results.</td>
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<td><strong>Limitations:</strong></td>
<td>The effect of the hospital size on the results was not investigated as subjects of the study were based on small and medium-sized hospitals. The effect of the handoff method was also not investigated as subjects of the present study include those who use written Kardex for handoff and those who use EMR for handoff. As a note, the use of EMR has a huge advantage in the acquisition and organization of information, which may affect the handoff quality.</td>
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<td><strong>Outcomes:</strong></td>
<td>Necessary to develop a structured handoff education system and standardized handoff method to enhance patient safety and nursing quality following implementation.</td>
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<td>Descriptive study</td>
<td>11 registered nurses participated, with ages ranging from 23 to 60 years old, average mean of work experience was 10 years. Setting took place at two oncology inpatient wards at the Karolinska University Hospital, Stockholm.</td>
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<td>Described nurses’ perceptions of person-centered handover and how to improve handovers for enhanced patient participation in the inpatient setting. Patient participation is hindered when handovers are given at the nurse station rather than at the patient’s bedside; nurses expressed that bedside handoffs contribute to a type of human-connection phase as it can connect patients and their families with the healthcare professionals. Staff members voiced that they were able to better prioritize their shift work because they have already visualized and assessed their patient at the beginning of their shift. The visualization of the patient was more informative than just reading and hearing about them in the electronic health records. Relating to the QI project, the journal article addresses the benefits of conducting bedside shift reports since it leads to many positive outcomes, such as patient-centered care and better work ethics among the staff. Moreover, these benefits can be shared with the stakeholders of my microsystem.</td>
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<td>Level III-A</td>
<td>Good transparency and insights provided on the benefits of bedside handovers.</td>
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<td>Limitations: Small number of participants and the specific setting may affect the transferability of the results.</td>
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<td>Outcomes: Implementation of bedside shift report showed increased staff satisfaction as it encourages teamwork for all shifts, promotes staff accountability, ensures the oncoming nurse receives pertinent information regarding their patient, and enables staff to prioritize patient care. Sheds light on aspects that should be considered when implementing patient-centered handovers, which include clinical communication and assessment, opportunity for patient participation, and consequences of nursing care.</td>
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<tr>
<td>Study</td>
<td>Methodology</td>
<td>Participants</td>
<td>Intervention</td>
<td>Outcomes</td>
<td>Limitations</td>
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<td>Lee, D. D., Colwill, A. C., Teel, J., &amp; Srinivas, S. K. (2018). Safe passage: Improving the transition of care between triage and labor and delivery. <em>Quality Management in Health Care</em>, 27(4), 223-228. <a href="https://doi.org/10.1097/QMH.0000000000000191">https://doi.org/10.1097/QMH.0000000000000191</a></td>
<td>Prospective observational study</td>
<td>17 pregnant women were collected as the baseline, pre-intervention phase, 10 pregnant people were taken during the implementation phase, and 50 pregnant people were assessed at 6 months post-intervention. Urban academic tertiary center</td>
<td>The study implemented various interventions to help improve the transition of care between the triage unit to L&amp;D by standardizing roles and processes, which helped improve workflow efficiency; the intervention resulted in a timelier initiation of communication and care for pregnant women transferred from the triage unit to L&amp;D. The standardization of the handoff process and establishment of a bedside huddle provided the team with clarity to the responsibilities of each team member. Moreover, a standardized script was also used to relay important information when transferring a pregnant patient from triage to the L&amp;D unit. A bedside huddle safety board was posted for RNs and providers to use as a visual guide for their bedside handoff. The suggestion of implementing a script guide for handoff may be beneficial for my QI project as it can standardize the information shared and the use of visual aids can be beneficial in keeping handoffs up to date, which would help improve transfer times and reduce the delay in care.</td>
<td>Level III-B Good information with transparency and self-reflection provided on each part of bundle process interventions.</td>
<td>The study was conducted at a high-volume teaching unit, which means the intervention may not be generalizable. Moreover, there was no patient-centered data obtained regarding the patients’ perception of safety and quality of care regarding the bedside handoff. Outcomes: The bundled process intervention helps ensure a more thorough transfer of information between the healthcare team and involves the pregnant woman as an active participant in her own care.</td>
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Kaiser Permanente designed and implemented a standardized nursing handoff practice called Nurse Knowledge Exchange (NKE) to ensure there is a standardized communication during handoff. The NKE included conducting shift change reports at the bedside using teach-back methods with patients, using patient care boards in the rooms to write goals for the shift, and a communication template with all the pertinent patient information RNs need for safe, efficient, and continuous care.

By 2012, 100% of the 64 medical/surgical units and 47 (77.0%) of the 61 specialty units in Kaiser Permanente Southern California medical centers had implemented NKEplus. The mean HCAHPS scores for nurse communication improved from 73.8% in 2010 to 77.4% in 2014. The mean score for the region on the NKE nursing behavior bundle improved from 65.9% in 2010 to 71.3% in the first quarter of 2014.

These findings correlate with my group’s QI project as the study’s setting is the same as our hospital: Kaiser Permanente. Therefore, we can state these results, percentages, and strategies to obtain buy-in from our stakeholders. For example, creating a checklist handoff tool for nurses to utilize during handoff would help standardize the reporting format and eventually lead to enhanced patient outcomes.
<table>
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<tr>
<td><strong>Randomized controlled trial</strong></td>
<td>60 handoffs, 52 participants finished the study. 26 RNs in the experimental (checklist) group and 26 RNs in the control (non-checklist) group.</td>
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<td><strong>Information loss can lead to an increase in medication errors, sentinel events, and poor patient outcomes; the use of checklists can be used to help decrease errors and improve safety. In this study, the checklist tool included information that identifies patient information, medical history, anesthesia, intraoperative course, and postoperative.</strong> With the help of a checklist tool, providers in the checklist group were able to identify more key elements of the report than those in the non-checklist group. There was also a decrease in the need for information clarification since the rate of callbacks was lower in the checklist group. In relation to my QI project, these findings will help strengthen our handoff tool intervention in the postpartum and L&amp;D unit. The development of a checklist tool during the report was found to be an effective way to avoid potential information loss, provide more clarity among the staff, and prevent patient errors or adverse outcomes.</td>
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<td><strong>Level I-A</strong></td>
<td><strong>Good quality of evidence with participant-driven inquiry, insightful interpretation of the information relating to relevant literature, and results that are statistically significant.</strong></td>
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<td><strong>Limitations:</strong></td>
<td>Anesthesia residents were not included in the study, which could have skewed the results based on their relative experience of giving a report. For example, CRNAs in the study had a minimum of 1-year experience as an anesthesia provider. In addition, the adequacy rating of handoff by the PACU RN was subjective and that the nurse’s experience level may influence the overall rating. Outcomes: The use of a checklist during a handoff can be beneficial for providers to correctly exchange information, which increases the adequacy of the handoff. Likewise, information loss and the need for clarification among providers during handoff were decreased with the use of the checklist tool.</td>
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<td>8</td>
<td>Systemic review</td>
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<td>The study identified which nursing handover styles were associated with improved outcomes for patients in the hospital setting.</td>
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<td>Majority of retrieved studies found the nature of handoff failures among hospitalized patients and argued that insufficient interpersonal communication between healthcare professionals was one of the main factors.</td>
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<td>This study is applicable and supportive to my QI project as developing a standardized transport protocol, like a checklist of pre-transport coordination, will help prevent transport-related adverse events. This is also what the microsystem currently needs as there is no protocol regarding the handoff reports between the postpartum and L&amp;D units. These findings support our intervention of developing a handoff tool for nurses to utilize during report, so they do not omit certain patient information and are aware of what to include during report.</td>
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<td>Level III-B</td>
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<td></td>
<td>Great analysis and evidence provided on the various factors contributing to handoff communication and patient outcomes.</td>
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<td></td>
<td>Limitations: Very limited to no randomized controlled trials were available for inclusion in this article.</td>
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<td>Outcomes: The following guiding principles are applicable to improving the nursing handover process: face-to-face communication, structured documentation, patient involvement and use of technology to support the process.</td>
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| 9 | Systematic mixed-methods review | Retrieving 54 articles, including 21 studies and 25 quality improvement projects. | The study explored how patient participation in nursing shift reports can be enacted. However, tension was found between standardizing handovers and making them predictable for patient participation. Therefore, training nurses to be flexible in their approach towards confidentiality/sensitivity and each patient's situation and preferences may be required. This finding can be applicable to the microsystem of my QI project as there is a lot of pushback regarding the implementation of bedside shift report to encourage patient participation. It is important for nurses to be confident in communicating with patients about potentially discussing sensitive and confidential information during bedside handover. For patients, strategies that make patient roles explicit can heighten their participation. For nurses, training may be needed to build their confidence and capacity to enable patient participation. These changes may improve the quality and safety of content and build the nurse-patient relationship.

As a solution to the pushbacks of our QI project goals, this study’s findings can be used as strategies to encourage nurses to conduct bedside shift reports and involve the patient in the report as much as possible (with the patient’s permission). | Level III-B | Insightful interpretation and definitive conclusion of past research studies and provided new ideas for further research. | Limitations: The study included research and QI projects that were irrespective of their quality, which may limit the usability of their findings. Researchers did not include stakeholder involvement in the review process; hence, future research should include patients’ viewpoints to strengthen findings. Although the study attempted to create an exhaustive search strategy, there may be some studies that were missed and not reviewed. Outcomes: Strategies to improve patient participation in handover include training nurses, making handovers predictable for patients, and increasing the interpersonal approach during handover. |
<p>| 104 | Medical-surgical nurses participated and completed the study’s pretest, with only 73 of those nurses having completed the posttest. The setting was based at a hospital in South Florida. |
| After the nurses participated in a 45-minute learning module presentation for the best practices for bedside shift reporting along with a new bedside handoff tool, nurses found improvement in work effectiveness (opportunity, information, support, and resources) empowerment, satisfaction, and communication. Participants identified that they experienced improved bedside shift-reporting capabilities, with positive staff and patient outcomes within the healthcare system. This study is applicable to my QI project in that it showcases the benefits and outcomes of bedside shift reports. The study’s research methods can be replicated in my QI project with engaging stakeholders (e.g., nurses) through an educational presentation, assess their baseline data, and then pilot the intervention of some of the nurses on the postpartum and L&amp;D units. With this process, there will be a Plan-Do-Study-Act cycle occurring as my group and I will be collecting feedback from the nurses on our handoff tool and find the best method for implementing this new handoff protocol. |
| Level III-A | Great information and insightful interpretation provided on the comparison of the pre- and post-test with the new handoff protocol. |
| Limitations: Study used convenience sampling with data from one hospital and one nursing unit. There was also a short pre- and post-data gathering period, which could have affected the results. Additionally, the participants were not matched from pretest to posttest. |
| Outcomes: In medical-surgical units, implementation of bedside shift reporting use and education led to the improvement of nurse accountability in practice, increased effectiveness in practice, increased job activities and satisfaction, and improved communication and organizational relationships. |</p>
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<tr>
<th>Page</th>
<th>Author(s)</th>
<th>Year</th>
<th>Title</th>
<th>Journal</th>
<th>DOI</th>
<th>Summary</th>
<th>Level</th>
<th>Limitations</th>
<th>Outcomes</th>
</tr>
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<tbody>
<tr>
<td>11</td>
<td>Williams, C. L.</td>
<td>2018</td>
<td>A comparison of the risks and benefits of nursing bedside shift report vs. traditional shift report: A systematic review of the literature.</td>
<td>International Journal of Studies in Nursing, 3(2), 40.</td>
<td><a href="https://doi.org/10.20849/ijsn.v3i2.382">https://doi.org/10.20849/ijsn.v3i2.382</a></td>
<td>Performing bedside shift reports can enhance patient safety and satisfaction among both the patient and the staff. Nurses can visualize patients and implement safety checks within the first hour of their shift. This decreases “alone” time for the patients and can help decrease potential risks that may occur during the change-of-shift. As nurses spend more time at the bedside during the report, the more likely a sentinel event can be prevented because patients are not alone during the period for the report. In relation to my QI project, this research emphasizes that bedside shift reports allow nurses to observe and communicate what is going on with their patients, which can make patients feel more involved in their care. My group and I can use these findings to encourage and persuade stakeholders (nurses) to conduct their NKE at the patient’s bedside if the patient allows.</td>
<td>Level V-B</td>
<td>Great quality information with transparency and insightful interpretation on the evidence supporting the importance of implementing bedside shift reports, as well as providing recommendations for practice.</td>
<td>Study lacked strong methodology and objective outcomes since the research was primarily comparing past research studies on the risks and benefits of bedside shift report versus traditional shift report (i.e., not at the bedside). Outcomes: While bedside shift report has been implemented within many inpatient settings, it is not always being utilized properly. Bedside shift reports were found to reduce medical errors, safety risks, and enhance the quality of care.</td>
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</table>

Systemic review
Retrieved scholarly and peer-reviewed journal articles using the top four tiers of evidence hierarchy. Utilized databases from Google Scholar, Cumulative Index of Nursing and Allied Health Literature (CINAHL), and Ovid databases; all of which were published within 2013 to 2018.

Performing bedside shift reports can enhance patient safety and satisfaction among both the patient and the staff. Nurses can visualize patients and implement safety checks within the first hour of their shift. This decreases “alone” time for the patients and can help decrease potential risks that may occur during the change-of-shift.

As nurses spend more time at the bedside during the report, the more likely a sentinel event can be prevented because patients are not alone during the period for the report.

In relation to my QI project, this research emphasizes that bedside shift reports allow nurses to observe and communicate what is going on with their patients, which can make patients feel more involved in their care. My group and I can use these findings to encourage and persuade stakeholders (nurses) to conduct their NKE at the patient’s bedside if the patient allows.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality improvement project</strong></td>
<td>28 nurses participated in the training for the modified bedside format and assessment of satisfaction in bedside reporting. A convenience sampling of 50 postpartum patients were also used to assess patient satisfaction with bedside reporting. The setting was based on a 13-bed postpartum unit in a 110-bed rural hospital.</td>
</tr>
<tr>
<td><strong>The implementation of a modified bedside handoff</strong></td>
<td>The implementation of a modified bedside handoff SBAR tool was developed to ensure that all components of the handoff were covered. The following components were included: review of electronic medical record (computer), SBAR, and development of goals. As for the SBAR, the “situation” and “background” components occurred privately between the two nurses, and the remainder of the report occurred at the bedside with patient consent. This was done in case there were any psychosocial or privacy issues the patient may want to keep private from their partners or families. The modified bedside handoff increased engagement with the nurse and patient, as well as potentially creating a safer patient environment by decreasing communication errors. Staff and patient satisfaction had also increased after the implementation of this handoff tool. Relating to my QI project, a replication of this study of implementing a bedside handoff SBAR tool can be done at my microsystem to help foster safety recommendations during handoff reports between postpartum and L&amp;D units.</td>
</tr>
<tr>
<td><strong>Level V-A</strong></td>
<td>Level V-A Detailed, high-quality qualitative findings on the handoff tool and nurse/patient questionnaires that can be utilized for other QI projects. Transparency in explaining the project findings.</td>
</tr>
<tr>
<td><strong>Limitations: A convenience sample of patients and staff was used, which can limit the project based on socioeconomic and ethnic characteristics of the patients and nurses in this population. In addition, the study was done in a small, rural hospital where there is a difference in the staff workflow and culture compared to larger hospitals.</strong></td>
<td>Outcomes: Educating staff and creating a modified bedside handoff tool resulted in an increased compliance by nurses to include all necessary components of the new handoff tool. The handoff model with the SBAR structure helps protect potentially sensitive patient information while also fostering family-centered care.</td>
</tr>
</tbody>
</table>
Appendix B

Statement of Non-Research Determination

Project: Statement of Determination and Non-Research Determination Form

Student Name: Lillian Quach

**Title of Project:** Transforming Peripartum Nurse Knowledge Exchange (NKE) through a Standardized Handoff Guide

**Brief Description of Project**

**Data that Shows the Need for the Project**
Currently, the peripartum mesosystem does not have a clear or standardized policy on the NKE process. Based on our preliminary observation data, nurses cover 75.8% of the necessary content of NKEs during handoff; however, they only give 28.5% at the bedside. Based on a pre-survey, 64% of nurses reported that the NKE they gave or received was very comprehensive or better. Informal dialogue and survey responses indicated that the NKE handoff process was not meticulous nor succinct; as a result, the staff commended the current project’s intervention.

**Aim Statement**
By the end of April 2024, we aim to improve the comprehensiveness of Nurse Knowledge Exchange (NKE) for postpartum nurses by 5% during the labor and delivery (L&D) to postpartum patient transfer through the implementation of a standardized handoff guide.

**Description of Intervention(s)**
A handoff guide based on best practices was created for nurses to reference and utilize during transfers. It was developed with feedback from floor nurses and leadership on both labor and delivery and postpartum units.

**Desired Change in Practice**
Standardizing the NKE process with our guide will ensure a thorough and consistent report during transfers of care from labor and delivery to postpartum. This includes utilizing computers on the workstations on wheels (WOWs) during reports and for NKE to occur at the bedside.

**Outcome measurement(s)**
The present project will measure the comprehensiveness of NKE based on our handoff guide, such as the increased percentage of NKE completeness in relation to the number of NKE points completed.
To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used:
(http://answers.hhs.gov/ohrp/categories/1569)

- This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Students may proceed with implementation.
- This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

**EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

<table>
<thead>
<tr>
<th>Project Title: Standardization of Nurse Knowledge Exchange (NKE) on the Peripartum Microsystem</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>The specific aim is to improve performance on a specific service or program and is a part of usual care. ALL participants will receive standard of care.</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.</td>
<td>☑️</td>
<td>☐</td>
</tr>
</tbody>
</table>
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/or patients. ☑ ☐

If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: “This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.” ☑ ☐

ANSWER KEY: If the answer to ALL of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. IRB review is not required. Keep a copy of this checklist in your files. If the answer to ANY of these questions is NO, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAMES (Please print):
Student Name: Lillian Quach

Signature of Student: [Signature]

DATE: 03/05/2024

SUPERVISING FACULTY MEMBER NAME (Please print):
Supervising Faculty Member Name: Scout Hebinck

Signature of Supervising Faculty Member: [Signature]

DATE: 03/05/2024
Appendix C

SWOT Analysis

SWOT Analysis Diagram

**Strengths**
- Clear objective and need
- Strong support from unit leadership
- Existing handoff covers 74% of necessary content
- Interdisciplinary collaboration
- Engaged unit-based councils
- Commitment to safety

**Weaknesses**
- Resistance to change/current culture
- Physical constraint (confined space to bring WOWs into postpartum rooms)
- Suboptimal managerial involvement
  - Staff turnover
  - NKE compliance data unknown
  - Time constraints

**Opportunities**
- Evidence-based
- Promotes culture of safety
- Staff development
- Patient centered
- Medical resident-focused teaching hospital
- Joint Commission mandated standardized bedside handoff in 2010

**Threats**
- Time constraints
- Slow-moving change
- Limited educational opportunities for new nursing workforce
- Physical/environmental constraints (unit not designed for peripartum)
Appendix D

Fishbone Analysis

Nurse Knowledge Exchange (NKE) Standardization
Fishbone Analysis

PEOPLE
- Not shift standard to have a postpartum charge
- Notification of a patient transfer varies
- Low morale between units
- Roles/responsibilities unclear for nurses involved in transfer process
- Absence of NKE checklist tool

ENVIRONMENT
- Multiple people in patients room contributing to a lack of privacy
- Confined physical space
- Highly distracting room
- High stress unit
- L&D nurses don't float to PP Unit
- Variable NKE requirements around NKE
- Multiple interruptions during NKE
- Unknown processes on policy of NKE and notice of transfer

MATERIAL

METHODS

EQUIPMENT
- Suboptimal use of Voceras
- Computers in hallway versus bedside
- Majority slow adopters
- Variable NKE processes
- Transfer of patients NKE not seen as priority
- Low priority to give family centered care

CULTURE

NKE IS NOT STANDARDIZED
## Appendix E

### Budget Analysis

**IMPLEMENTATION OF STANDARDIZED NKE**

Aim: By the end of April, 2024, the project aims to improve the comprehensiveness of Nurse Knowledge Exchange (NKE) for postpartum nurses by 5%, during the labor and delivery (L&D) to postpartum patient transfer through the implementation of a standardized handoff tool.

By: Kiana Killian, Kimberly Martinez, Gaby Ochoa, Lillian Quach, Gabby Romera

<table>
<thead>
<tr>
<th>Implementation Cost</th>
<th>Description</th>
<th>Total expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of guide</td>
<td>($0.10 per sheet)</td>
<td>$0.60</td>
</tr>
<tr>
<td>CNL educator cost</td>
<td>$68/hr (average CNL salary) x 1.3 (hrs + benefits) x 200 hr (preparation &amp; training)</td>
<td>$17,680.00</td>
</tr>
<tr>
<td>Nurse education</td>
<td>$75/hr (average FTE nurse salary) x 1.3 (hours + benefit) x 1 hr (training) x 176 FTE RNs</td>
<td>$17,160.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$34,840.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Hospital Savings (Cost Avoidance)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total births per year</td>
<td>3,000 per year = 3,000 transfer per year</td>
</tr>
<tr>
<td>Transfers in violation of HIPAA Compliance</td>
<td>85% = 2,550 transfers</td>
</tr>
<tr>
<td>HIPAA Compliance Violation</td>
<td>$1,379,988,028 (Tier 2 violation) → average: $35,154</td>
</tr>
<tr>
<td>Cost avoidance</td>
<td>$2,550 x $1,379 BUT max is $2,067,813 (based on Tier 2 table)</td>
</tr>
<tr>
<td><strong>Net Savings</strong></td>
<td><strong>$2,032,966</strong></td>
</tr>
</tbody>
</table>


### Appendix F

#### Gantt Chart

The Gantt chart below illustrates the project timeline for transforming Peripartum Nurse Knowledge Exchange (NKE) through a Standardized Handoff Guide.

<table>
<thead>
<tr>
<th>TASK TITLE</th>
<th>DUE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Project Planning</strong></td>
<td></td>
</tr>
<tr>
<td>Literature Review</td>
<td>3/3/2024</td>
</tr>
<tr>
<td>Evidence Appraisal Table</td>
<td>2/26/2024</td>
</tr>
<tr>
<td>Meeting with NM, OBC</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Develop NKE Checklist &amp; Feedback</td>
<td>2/15/2024</td>
</tr>
<tr>
<td>Finalize NKE Checklist</td>
<td>3/21/2024</td>
</tr>
<tr>
<td>Develop Pre-Survey Questions</td>
<td>2/14/2024</td>
</tr>
<tr>
<td>Finalize Pre-Survey Questions</td>
<td>2/14/2024</td>
</tr>
<tr>
<td>Develop Pre-Survey Flyer</td>
<td>2/16/2024</td>
</tr>
<tr>
<td>Disseminate Pre-Survey Flyer</td>
<td>3/13/2024</td>
</tr>
<tr>
<td>Develop Post-Survey Questions</td>
<td>4/1/2024</td>
</tr>
<tr>
<td>Finalize Post-Survey Questions</td>
<td>4/1/2024</td>
</tr>
<tr>
<td><strong>2 Implementation</strong></td>
<td></td>
</tr>
<tr>
<td>Observe Baseline Transitions</td>
<td>3/8/2024</td>
</tr>
<tr>
<td>NKE Checklist Staff Education</td>
<td>4/1/2024</td>
</tr>
<tr>
<td>Observe Post-education Transitions</td>
<td>4/12/2024</td>
</tr>
<tr>
<td><strong>3 Project Evaluation</strong></td>
<td></td>
</tr>
<tr>
<td>Develop Post-Survey Flyer</td>
<td>4/1/2024</td>
</tr>
<tr>
<td>Collect Post-Survey Responses</td>
<td>4/12/2024</td>
</tr>
<tr>
<td>Analyze Pre/Post-Survey Responses</td>
<td>4/19/2024</td>
</tr>
<tr>
<td><strong>4 Project Performance</strong></td>
<td></td>
</tr>
<tr>
<td>Poster Presentation</td>
<td>4/30/2024</td>
</tr>
<tr>
<td>Submit Paper to USF Repository</td>
<td>5/13/2024</td>
</tr>
<tr>
<td>Present to KP Leadership</td>
<td>5/6/2024</td>
</tr>
</tbody>
</table>
Appendix G

Pre-Survey Questions

QI: Pre-Survey

Hello, we are the University of San Francisco ME-MSN nursing students conducting a quality improvement (QI) project on your microsystem focused on NKE during patient transfers from L&D to Postpartum. Thank you for taking the time to complete our pre-survey.

Please answer every question. Remember this is an anonymous survey and will only be used to aid in measuring the impact of our intervention [checklist tool]. Please refrain from including any staff names or patient identifying information.

Department/Unit:

- [ ] Postpartum
- [ ] L&D

Years of nursing experience:

________________________________________

Process: How do you give or receive a handoff report during patient transfer from L&D to Postpartum?

- [ ] Over the phone
- [ ] In person (hallway, nurse's station)
- [ ] At the patient's bedside
- [ ] Other ________________________________
Patient-Centered Care: How often do you give or receive a handoff/NKE report at the patient's bedside during a patient transfer?

- Always
- Very frequently
- Occasionally
- Rarely
- Never

If a handoff/NKE report is not done at the patient's bedside, what are some common reasons why?

<table>
<thead>
<tr>
<th>Comprehensiveness: How comprehensive do you find the current handoff you give or receive during a patient transfer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Extremely comprehensive</td>
</tr>
<tr>
<td>- Very comprehensive</td>
</tr>
<tr>
<td>- Moderately comprehensive</td>
</tr>
<tr>
<td>- Slightly comprehensive</td>
</tr>
<tr>
<td>- Not comprehensive</td>
</tr>
</tbody>
</table>

Effectiveness: How effective do you find the current handoff you receive in facilitating communication during the patient transfer process?

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not effective at all
- Unsure
Overall Satisfaction: Overall, how satisfied are you with the report you receive for patient transfers?

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Extremely dissatisfied

Suggestions for Improvement: Please provide any additional comments or suggestions for improving the report checklist.

Thank you for taking the time to complete this survey. Your feedback will help us identify areas for improvement and enhance the effectiveness of our nursing practices. If you have any questions or concerns, please contact usfnpjproject@gmail.com
Appendix H

Pre-Survey Flier

1. Take survey
   - ~2 min long
   - CONFIDENTIAL!

   https://usfca.qualtrics.com/jfe/form/SV_0uIXbeARHHu9Ugu

2. Share it with a coworker
   - Your feedback will help guide QI initiatives

3. Grab a treat
   - Located in the breakroom

Questions? Email us!

USFQIPROJECT@GMAIL.COM
Appendix I

Evaluation Tool

At the Bedside: **utilize a computer at bedside**

- Off: going nurse introduces on-coming nurse to patient **write name on board**

- **Background**
  - Name(s) **check bands**
  - Age
  - Allergies
  - Pregnancy History (GDM, complications, Pre-e)
    - Prenatal Labs (Blood Type, RPR, Rubella, GBS, STIs, etc.)
  - Medical/Surgical History, Psychosocial History, COVID status

- **Situation: Time & Type of Delivery**

<table>
<thead>
<tr>
<th>Vaginal Delivery</th>
<th>C - Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>QBL</td>
<td>QBL</td>
</tr>
<tr>
<td><strong>Laceration</strong></td>
<td>Assess dressing <strong>view dressing for drainage</strong></td>
</tr>
<tr>
<td>Pain Control method</td>
<td>Type of anesthetic</td>
</tr>
<tr>
<td>Assistive device</td>
<td>Medication(s) given</td>
</tr>
<tr>
<td>Complications (Mom + Newborn)</td>
<td></td>
</tr>
</tbody>
</table>

- Baby Progress
  - APGAR Score + weight
  - BG Check?
  - Meds (Hep B, Vit K, erythromycin)
  - Feeding plan/fast feeding
    - Colostrum, hand expressing, latching assessment
  - Vitals
  - Void(s)/Stool (in utero?)

- **Assessment:**
  - Inspect wounds/incisions,
  - IV sites (**both RNs trace Mg, Pit lines**)
  - Fundal assessment (**both RNs, assess for bleeding**)
  - Ambulation
  - Diet
  - Void/foley catheter
  - If necessary: Bladderscan

- **Computer:**
  - Orders & care plan
  - Upcoming tasks & labs (review labs drawn and schedule for future lab draws)

- **Recommendation:** Goals for the shift and discharge goal **engage patient and write goals on white board**

- Questions: Ask patients and family if they have any questions or additional information that they would like to add.
Appendix J

NKE Handoff Guide

### NKE TO BE DONE AT THE BEDSIDE + UTILIZE A COMPUTER

- Introduce oncoming nurse to patient
  - "Oncoming nurse writes name on the board"
  - Name(s) **check bands**
  - Age
  - Allergies
  - Pregnancy History (GTPAL, GDM, complications, Pre-E)
    - Prenatal Labs (Blood Type, RPR, Rubella, GBS, STIs, etc.)
    - Medical History (pertinent psychosocial history, COVID status)

### SITUATION: Time & Type of Delivery

#### VAGINAL DELIVERY
- QBL
- Laceration
- Pain control method
- Type of assisted delivery

#### C-SECTION
- QBL
- Pain control method
- Other medication(s) given

#### Complications/Implants (Mom + Newborn)
- Retained placental parts? IUD?

#### Baby Progress
- APGAR Scores + Weight
  - BG Check?
- Meds (Hep B, Vit K, erythromycin)
- Feeding plan/last feeding
  - Colostrum, hand expressing, latching assessment
- Vitals
- Void(s)/Stool (in utero?)

#### FOCUSED ASSESSMENT
- IV sites ("both RNs trace Mg, Pit lines")
- Fundal + wound assessment ("both RNs assess for bleeding")
- Ambulation & Diet (oral intake)
- Void/Foley catheter

#### COMPUTER
- Orders & plan of care
- Upcoming tasks & labs (review labs drawn and schedule for future lab draws)

#### RECOMMENDATION
- Goals for the shift and discharge goal
  - Engage patient and write goals on white board
- Questions: Ask patients and family if they have any questions or additional information that they would like to add.
Appendix K

Education Plan Presentation for PP Unit

**Introduction to Project**

**NKEs**
- Bedside handoff involving both L&D and PP RNs as well as the patient.

**PICOT Question**
- For peripartum RNs, does implementing a standardized handoff tool enhance the comprehensiveness of the handoff process during L&D to PP patient transfers over a 4 week period?

**AIM Statement**
- By April 7, 2024, we aim to improve the comprehensiveness of NKE for PP RNs by 5% during the L&D to PP patient transfer through the implementation of a standardized handoff tool.

**Our Progress So Far...**

**Literature Review**
- Literature suggests bedside handoff improves patient outcomes

**Developed Checklist**
- NKE required components were identified through literature and staff feedback

**Requested Feedback**
- Pre-survey helped to identify current barriers and practices to bedside NKEs
### Literature Review

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Study Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lin et al.</td>
<td>2015</td>
<td>111 Kaiser South California nurse units implemented NKEplus, which included report/safety check standardization, unit support for uninterrupted beside report, and patient collaboration to fill out care boards.</td>
<td>After implementation, aggregate HCAHPS* scores improved by 0.2 to 5.9%. Nurse satisfaction was not assessed. Change was not sustained after project.</td>
</tr>
<tr>
<td>Lee et al.</td>
<td>2018</td>
<td>A quality improvement project implemented practice to define and standardize roles of team members and to include a huddle safety board during handoff between triage and L.D.</td>
<td>Huddle compliance increased from 48% to 84% and, thus, reducing delays in patient care.</td>
</tr>
</tbody>
</table>

\*HCAHPS = Hospital Consumer Assessment of Healthcare Providers and Systems, a survey that measures patient perception of their hospital experience.

### Literature Review

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Study Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ong et al.</td>
<td>2011</td>
<td>A systematic review looked at studies of intra-hospital transfers from 1980 to 2011 to characterize why handoffs fail or are ineffective.</td>
<td>A lack of structure and protocol for handoff often results in content omission, uncertainty, and, as a result, adverse patient outcomes.</td>
</tr>
<tr>
<td>Dai &amp; Robins</td>
<td>2015</td>
<td>A randomized control trial studied 60 OR to PACU handoffs where half utilized a standardized handoff checklist and the other half did not.</td>
<td>92% of RNs who used the checklist were able to recall all information provided in the report compared to 54% of RNs who did not use the checklist.</td>
</tr>
</tbody>
</table>
Current Pre-Survey Results

27% Patient-Centered Care
Respondents report that they always do NKE at the bedside

43% Process
Respondents report doing NKE in the hallway or nurse's station

64% Comprehensiveness
Respondents report that NKE is very comprehensive or better

Developed Checklist Tool
**Preliminary Baseline Observations**

- **76%**
  - Percent of NKE completeness, regardless of location

- **28%**
  - Percent of NKE occurring at bedside

- **33%**
  - Goal of bedside NKE completeness by April 7

**Barriers**

- **Privacy**
  - Part of NKE is inviting the patient to participate in the discussion, focusing on language used

- **Computer at Bedside**
  - Utilizing a computer at the bedside can facilitate giving report and prevent miscommunication of report

- **Culture Differences**
  - Implementing a tool to guide and standardize handoff
Appendix L

Education Plan Presentation for L&D Unit

Our Project

**PICOT Question:** For peripartum RNs, does implementing a standardized handoff tool enhance the comprehensiveness of the handoff process during L&D to PP patient transfers over a 2 week period?

**Aim Statement:** By the end of April 2024, we aim to improve the comprehensiveness of NKE for PP RNs by 5% during the L&D to PP patient transfer through the implementation of a standardized handoff tool.

---

Literature Review

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
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</tbody>
</table>
## Literature Review

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Study Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nematollahzadeh et al.</td>
<td>2022</td>
<td>A prospective intervention study observed 62 cardiac OR to cardiac ICU handoffs; half before staff training and half after staff training.</td>
<td>Implementing the standardized handoff protocol reduced the frequency of technical errors and unintentional omission of information as well as the number of disruptions during handoff.</td>
</tr>
<tr>
<td>Dai &amp; Robins</td>
<td>2015</td>
<td>A randomized control trial studied 60 OR to PACU handoffs where half utilized a standardized handoff checklist and the other half did not.</td>
<td>92% of RNs who used the checklist were able to recall all information provided in the report compared to 54% of RNs who did not use the checklist.</td>
</tr>
</tbody>
</table>

## Our Progress So Far...

**Baseline Observations**
- Observed 20 patient transfers over the course of 3 weeks.

**Requested Feedback**
- Pre-survey helped to identify current barriers and practices to bedside NKEs

**Pilot Project**
- In the beginning stages of implementing our handoff guide intervention
Our Evaluation Tool

Baseline Observations

- **74%**
  - Percent of NKE completeness, regardless of location
- **33.5%**
  - Percent of NKE occurring at bedside
- **38.5%**
  - Goal of bedside NKE completeness by the end of April
Baseline Observation Trends

Never occurred
Computer used at bedside

Always occurred
At Bedside: Name(s) **check bands**

Always covered
At Bedside OR Nurses station: Introductions, Pregnancy History, Time/Type of Delivery, Pain control method

Important Content

Background
Bedside vs. Bedside+NS
29% vs. 82.5%

Situation
Baby Progress
36% vs. 95%

19% vs. 74%

Our Tool
Will be laminated and placed on each PP WOW

L&D TO PP NKE GUIDE

INSTRUCTIONS

1. Place laminated form near the patient's bedside

2. Complete the chart by adding the patient's specific information

3. Check off any areas that require attention

4. Sign and date the form

5. Keep the form in a secure location for future reference
### Suggested Phrases

<table>
<thead>
<tr>
<th>Replacing exclusive or medical language with plain language that she can understand</th>
<th>Example of poor language</th>
<th>Suggested alternative language</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;SNIV&quot;</td>
<td>&quot;Your waters have broken.&quot;</td>
<td>&quot;<em>Example</em> of poor language&quot;</td>
</tr>
<tr>
<td>&quot;VPL&quot;</td>
<td>&quot;Extra bleeding after childbirth.&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
<tr>
<td>&quot;HIV&quot;</td>
<td>&quot;Blushing during pregnancy.&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
<tr>
<td>&quot;VBAC.&quot;</td>
<td>&quot;Vaginal birth after caesarean birth.&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
<tr>
<td>&quot;Avoid discouraging or invasive language&quot;</td>
<td>&quot;Failed VBAC / induction.&quot;</td>
<td>&quot;Successful VBAC / induction.&quot;</td>
</tr>
<tr>
<td>&quot;Poor maternal effect.&quot;</td>
<td>&quot;Is not finding it easy...&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
<tr>
<td>&quot;Failure to progress.&quot;</td>
<td>&quot;Now labour...&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
<tr>
<td>&quot;Terminate pregnancy.&quot;</td>
<td>&quot;When there is a terminal diagnosis...&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
<tr>
<td>&quot;Pregnancy induced hypertension.&quot;</td>
<td>&quot;Medically complex.&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
<tr>
<td>&quot;Pelvic examination.&quot;</td>
<td>&quot;Medically complex.&quot;</td>
<td>&quot;Example of poor language&quot;</td>
</tr>
</tbody>
</table>

### Pilot Project

1. Identify unit champions
2. Briefly educate champions on use of the tool
3. Observe tool in use in ~10 NKEs
   a. ~1-2 NKEs per champion
4. Collect post-surveys and feedback from champions
5. Prepare for the next PDSA cycle
Education

1. Introductions
2. What is NKE
3. Why is it important
4. Overview of the tool components
5. Responsibility & Accountability
6. Questions
Appendix M

Post-Survey Questions

QI: Post-Survey

Hello, we are the University of San Francisco ME-MSN nursing students conducting a quality improvement (QI) project on your microsystem focused on NKE during patient transfers from L&D to Postpartum. Thank you for taking the time to complete our post-survey after utilizing our NKE guide.

Please answer every question. Remember this survey will only be used to aid in measuring the impact of our intervention [NKE guide].

Name:
(This will only be used to follow up on any feedback if necessary)

________________________________________

Department/Unit:

- [ ] Postpartum

- [ ] L&D
Comprehensiveness: How comprehensive did you find the handoff you gave or received during a patient transfer after utilizing the NKE guide?

- Extremely comprehensive
- Very comprehensive
- Moderately comprehensive
- Slightly comprehensive
- Not comprehensive

Effectiveness: How effective did you find the handoff you gave or received in facilitating communication during the patient transfer process after utilizing the NKE guide?

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not effective at all
- Unsure
Patient-Centered Care: After utilizing the handoff guide, how likely are you to give or receive NKE at the patient’s bedside during a patient transfer?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

After utilizing the NKE guide, do you foresee a time when you may be unable to use it? If so, what are some reasons why?

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Overall Satisfaction: How satisfied are you with the report you gave or received during a patient transfer after utilizing the NKE guide?

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Extremely dissatisfied

Suggestions for Improvement: Please provide any additional comments or suggestions for improving the report checklist.

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Appendix N

PDSA Cycle

**Modifications:**
Feedback adaptation, tool revision
Formal RN education session
Substantiate the need for change with literature

**Next PDSA Cycle:**
Pilot the revised tool, observe 20 transfers, and involve leadership early

**Summary:**
Intervention led to improved NKE comprehensiveness

**Reflection:**
L&D nurses welcomed guide
Absence of culture for bedside handoff and computer use
Educating both RNs is essential to a smooth handoff

**Questions & Predictions:**
Nurse push back to bedside NKE due to privacy concerns & patient need perception

**Who, What, Where, When:**
10 L&D to PP transfers
Identification & education of impromptu champions
Observe unit champions utilize NKE guide

**Data Collected & Observations:**
Observed use of NKE guide in 10 transfers from L&D to PP
Observed use of break nurses during handoff
Gave post-survey to obtain feedback
Huddle participation made nurses more inclined to participate
Appendix O

Pre-Survey Results

Figure O1

**Process:** How do you give or receive a handoff report during patient transfer from L&D to Postpartum?

- 54%
- 45%
- 4%

Legend: Other, At the patient's bedside, In person (hallway, nurse's station)

Figure O2

**Patient-Centered Care:** How often do you give or receive a handoff/NKE report at the patient's bedside during a patient transfer?

- Always: 29%
- Very frequently: 26%
- Occasionally: 38%
- Never: 17%

Legend: Never, Occasionally, Very frequently, Always
**Figure O3**

Comprehensiveness: How comprehensive do you find the current handoff you give or receive during a patient transfer?

- Slightly comprehensive: 52%
- Moderately comprehensive: 23%
- Very comprehensive: 19%
- Extremely comprehensive: 10%

**Figure O4**

Effectiveness: How effective do you find the current handoff you receive in facilitating communication during the patient transfer process?

- Unsure: 26%
- Not effective at all: 39%
- Slightly effective: 3%
- Moderately effective: 3%
- Very effective: 19%
- Extremely effective: 10%
Figure O5

**Overall Satisfaction:** Overall, how satisfied are you with the report you receive for patient transfers?

- Somewhat dissatisfied: 19%
- Neither satisfied nor dissatisfied: 19%
- Somewhat satisfied: 19%
- Very satisfied: 52%

Legend:
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Very satisfied
Appendix P

Preliminary Baseline Observation Data

Graph P1

Graph P2
Graph P3

Graph P4
Graph P5

Graph P6
Graph P7

NKE Baseline Observations: Computer and Recommendations

- **Computer used at bedside**
- **Orders & care plan**
- **Upcoming tasks & labs**
- **Goals for the shift and discharge goals**
- **Ask for patient input**

Average Percentage of Completion

- Bedside ONLY
- Bedside OR Nurses Station
Appendix Q

Post-Intervention Observation Data

Graph Q1

Graph Q2
Graph Q3

NKE Post-Intervention Observations: Introductions and Background

- On-coming nurse introduction
- Name(s) **check bands**
- Age
- Allergies
- Pregnancy History
- Prenatal Labs
- Medical/Surgical History

Average Percentage of Completion

Graph Q4

NKE Post-Intervention Observations: Situation

- Time & Type of Delivery
- QBL
- Laceration/Assess dressing
- Pain Control method/Type of anesthetic
- Type of assisted delivery
- Complications (Mom + Newborn)

Average Percentage of Completion
Graph Q5

NKE Post-Intervention: Baby Progress

- APGAR score
- Weight
- Blood Glucose Check
- Medications
- Feeding plan/last feed
- Breastfeeding Assessment
- Vitals
- Void(s)/Stool

Average Percentage of Completion

Graph Q6

NKE Post-Intervention: Assessment

- IV Sites
- Fundal & wound assessment
- Ambulation
- Diet
- Void/foley catheter

Average Percentage of Completion
Graph Q7

NKE Post-Intervention: Computer Use and Recommendations

- Computer used at bedside
- Orders & care plan
- Upcoming tasks & labs
- Goals for the shift and discharge goals
- Ask patient for input

Average Percentage of Completion
Appendix R

Improvement in Bedside NKE Comprehensiveness

![Bar chart showing improvement in NKE comprehensiveness across different categories: Introductions and Background, Situation, Baby Progress, Assessment, Computer Use and Recommendations. The chart compares baseline vs. post-intervention.]
Appendix S

Post-Survey Results

Figure S1

**Comprehensiveness**: How comprehensive did you find the handoff you gave or received during a patient transfer after utilizing the NKE guide?

![Comprehensiveness Pie Chart]

*Very comprehensive*  
*Extremely comprehensive*

Figure S2

**Effectiveness**: How effective did you find the handoff you gave or received in facilitating communication during the patient transfer process after utilizing the NKE guide?

![Effectiveness Pie Chart]

*Very effective*  
*Extremely effective*
Figure S3

**Patient-Centered Care:** After utilizing the handoff guide, how likely are you to give or receive NKE at the patient’s bedside during a patient transfer?

- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Figure S4

**Overall Satisfaction:** How satisfied are you with the report you gave or received during a patient transfer after utilizing the NKE guide?

- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Very satisfied